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THE EDUCATION OF CHILDREN WITH DEFECTIVE
VISION.*

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(Continued from p. 268.)

AFTER consideration and experiment the following scheme of work for various grades of boys and girls has been drawn up. Since boys and girls are educated together in these classes, for the most part they take the same kinds of work, and there is no special difficulty arising out of the arrangement, for the teaching is much more individual in the small classes of the myopes than can be provided in the larger classes of the normal school.

CLASSIFICATION.

For general convenience the children can be considered in three groups, according to age and attainments: (I) Standards 1 and 2, for those aged 7 to 10; (II) standards 3 to 6, for those aged 10 to 13; (III) standard 7, for those aged 13 and 14. It will be under-

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stood that there is considerable interchange in the grouping, as individual children excel in one or other forms of work.

Handicraft has value in two directions. The first and most obvious is that of the training of the "hand and eye" in the doing of useful work. That is the purely utilitarian aspect of the work, and it is the one that becomes the more evident in the higher standards. The second line of value is one of association; with the doing of some particular form of work it is possible to attach lessons in history, arithmetic, and language. This association is the more easily developed with the work of the younger children, and it is of particular value to them. For brevity's sake the first line of value will be described as utilitarian, and the second as the expressional, since the children are taught to express some idea in concrete form.

GROUP I: STANDARDS 1 AND 2, AGES 7 TO 10.

(A) *Bead work*.—Stringing large beads is one of the earliest pieces of work to be taught. Later simple designs are worked, and finally fancy blinds for windows made. Besides the actual practice of the work there are attached lessons in arithmetic. Children readily learn to thread beads with very little examination by the eyes provided the beads are of sufficient size.

(B) *Paper folding, cutting, and modelling*.—In this work stiff paper is used, the children are taught to fold it into certain lines, then to cut out various squares, and finally to set up the remaining portion into the form of some common object. The folding is an aid to the teaching of arithmetic, so is the cutting, and finally the object itself is a peg on which to attach an "object lesson"—*e. g.*, a piece of brown paper 12 in. square is given to each child. (1) The edges are measured and compared. The sum of the measurements of the edges is found. The inches are then taken as feet, and the cost of binding the several edges found. The same for the measure in yards. Then the inches are taken as miles and the cost of travelling such a distance calculated. (2) The children fold bottom edge to top edge and compare sides (halves). (3) They fold into quarters and measure new distance round (quarter area). (4) They fold into eighths and repeat exercises. (5) Into sixteenths. (6) Calculate the cost of paper of several areas got by folding. (7) Bend over the folded paper, tuck in sides, gum them, and a model barn is produced. (8) The children find the length, breadth, height, and distance from one side over the roof to the other. A great number of simple articles are made in this fashion, and with each is associated an "object lesson," these lessons

are therefore truly expressional, some idea is worked out in each. The following is a list of objects made by one of the classes: Trays of various shapes for trinkets, buttons, pens, silkworms; cases for pocket combs, buttonhooks, needles, hatpins, cards, stamps and spectacles; frames for pictures and photographs, of various shapes and folding; boxes, with lids, and sliding; hanging spillholders, triangular, square, hexagonal, and wall tidies for hair, etc.; purse; doll's house, scissors sheath, book case, blotter, fire screen, plant pot holders. Paper weaving, for the purpose of making small mats and book marks, was formerly practised, but this has been stopped. Too much close attention of the eyes was required, and there was no expressional value in the work.

(c) *Modelling in clay and plasticine*.—This is a very favourite form of work with all children, and it is capable of unlimited expansion, both as a simple handicraft practice and in expressional work. Further, it is admirably adapted for the cultivation of the individual powers of the children. No eyestrain is involved, for the mass of material with which the work is done is large; there is no desire to bring it close to the eyes, for the size of the detail will be determined by the sight of the child, so stooping is not fostered. It is possible to associate this work with lessons in arithmetic and general history.

(d) *Toy making*.—With the aid of such simple materials as old matchboxes, corks, sticks, and wool, a large variety of toys are made. In this fashion the children are able to produce in a material of somewhat more stable character the work of modelling. The toys are kept by the little ones and taken home, to the interest of the parents. Use is also made of the different forms of prepared wooden strips for the building up of toys, such as the "interlocking building blocks"—these are of value in dull and cold weather; with them models can be built up easily when the light is poor and hands are cold.

(e) *Drawing*.—With all the foregoing work there is associated drawing on the blackboards, or on large paper sheets in chalks. This drawing is systematic with a view to the introduction of design, and is preparatory to some of the modelling tasks, and the more especially introductory to the bent iron work of the succeeding standards. Free drawing on the boards is encouraged, and some of the children develop considerable skill in picture production. In one of the schools the influence of the teachers in this direction is marked by the high grade of really artistic work done by the children. All this work is done on a large scale, an ordinary draw-

ing taking a space of 20 in. by 30 in., that is the full range of the child's arm. No small scale drawing such as is common in the normal schools is permitted. The children readily fall in with the habit of drawing in this fashion, and the work is always done standing.

(F) *Other handicraft work of purely utilitarian character.*—Knitting is begun. In this care is taken to foster the habit of working without looking at the work; if the child shows no ability to do this then the work is stopped. The work done includes plain knitting, casting on and off, the making of dusters, kettleholders, babies' hats, reins, whips, and rattles. String bag making is begun, also cane weaving and raffia winding, in the making of articles such as frames, mats, napkin rings, etc. Silk and linen fraying for the making of book markers has been tried, but abandoned, for it required continual attention of the eyes in the selection of fine strands of material; further it is said that the practice fosters a tendency to destructiveness.

GROUP II: STANDARDS 3 TO 6, AGED 10 TO 13.

Following the order of work for the previous group marked A to E.

(A) *Bead work* is practically stopped, for its educational value is small. Some few girls, however, carry on with it for the making of Japanese window screens. The fine bead work for making bags, etc., is necessarily barred.

(B) *Paper work.*—This gives place to cardboard modelling, in association with lessons in arithmetic, language, etc. Similar articles to those made in paper are now made in cardboard.

(C) *Modelling in clay and plasticine* is continued for its expressional value in the teaching of history, geography, etc., and there is a beginning in the use of paper pulp for the production of permanent models.

(D) *Toy making.*—Strip wood work and simple carpentry is begun and developed. The work is of value in the practice of making objects, and also in association with the teaching of arithmetic, *e. g.*, making of a barn according to the example of paper folding is developed, and the model barn is made in wood. Inches are taken as feet, and the barn is measured: Base 20 by 14, height 12, roof 6 by 6. The wood required is measured up, and the cost found at 2*d.* a foot. Cost of paint at 1*d.* a foot. Cost of nails at 3*d.* a lb. A great number of models are made such as ladder, fence, easel, swing, signal, notice-board, frames, drain, garden seat, deck chair and table.

(E) *Drawing.*—The systematic design drawing expands into bent

iron work. This is an excellent form of handicraft for the short-sighted. For the most part it can be done with the eyes looking right forward at the work. With a bench or table of a proper height for the child there is no necessity for stooping, such as is involved in the use of carpentry tools. The work has drawbacks in that a good deal of noise is involved, and that in some of the advanced work the children have scarcely sufficient muscular strength to bend the iron unaided. The variety of this work done is as follows: Formation of C and S curves, joining by means of clamping, and by means of rivets, drilling, and fixing rivets. The older children proceed to make such articles as watch stands, calendar stands, flower-pot holders, letter and key racks, photograph easels, flower glass holders, double photograph frames, oval frames, fire screens.

(F) *Utilitarian crafts*.—In these higher standards work that was originally expressional becomes utilitarian, except in so far as the cost of the work can be worked out. Materials cost but little in comparison with the time expended, but this can be assessed and the practice of arithmetic associated with the more attractive handwork. Knitting is continued. Lock knitting is applied to the making of hats, bonnets, muffs, necklets. Plain and purl in various patterns such as ribbing, imitation brioche, dice. Vests, scarves, tea cosies, and jerseys are made. String-bag making is developed. Casting on, passing stitches over, counting rounds, taking work off from frame, casting off, making cords for handle, putting on rings, and fastening off ends are taught and practised. The work does not involve eye-strain when the child shows a capability for it. They are not allowed to hold the work in their laps; it must be placed on the flat-topped myope desk (*v.* Fig. 6). Raffia work is continued in association with cardboard work. It is useful as a mode of cultivating "taste." No raffia weaving or sewing is permitted, for these are far too trying to the eyes. Book-binding of an elementary kind is begun. The children are taught to bind into folios the large printed sheets produced with the rubber-faced types in class work. Mat-making was tried, but stopped. It is a utilitarian work of the dullest and most routine kind, and has no immediate or prospective value for children of this degree of intelligence.

GROUP III.—STANDARD 7, AGED 13 AND 14.

It is in this group that the greatest difficulty is found in providing a sufficiency of good handicraft such as can be done by highly myopic children. Carpentry would be ideal, were it not for the

necessary stooping posture and the use of plan drawing and measuring. That prohibits the work for these children in anything like a full development.

Comparing their schedule with that of the former groups :

(A) *Bead work* is stopped.

(B) *Paper folding* is developed on occupational lines; envelope folding, show-card making, and box-making are taught. To some extent, arithmetic lessons can be introduced by calculating the cost of material and time.

(C) *Modelling* is practically confined to the use of paper pulp; this has an educational value in the teaching of geography, and a utilitarian side, as the elder children may be able to produce permanent models for the use of the younger children, and for the blind schools.

(D) *Toy-making* includes all the carpentry these children can undertake; many of them show considerable skill in the work.

(E) *Drawing* and design are developed in the bent iron work. It is proposed to attempt repoussé work, and tin-smith work. Repoussé work, even more than bent iron work, has the disadvantage of the noise involved. Repoussé work as ordinarily done would not be permissible for the highly myopic, since the flat bench and the continual stoop over the work would be injurious. It would, however, be quite practicable for the work to be done on wall benches sloped at the angle of 30° from the perpendicular; the benches would have a 2 or 3 in. ledge on which to support the work and tools; the children would work standing before the wall benches in very much the attitude of the sculptor. Tin-smith work would provide an additional exercise for the cleverer boys, but educationally it is no more than a development of the cardboard modelling.

(F) Knitting is continued by the girls. Bag making is stopped, but cane and basket work is continued. Raffia work is stopped since the full development is prohibited for these children. Book-binding is developed. The girls learn domestic work and simple cookery.

One of the best of the handicrafts for these older children is the printing, to which attention has been drawn. For value in the inculcation of thought, care, exactness, general neatness and cleanliness of work, it is scarcely to be bettered. The materials employed are simple, and the work is variable to the ability of almost every grade of child. The only limitation is the one that confines the use of sticky black pigments to those who can keep themselves clean.

OCCUPATIONS FOR MYOPES.

In the former account of the myope classes some remark was made on the work of these children after school years. The necessary inquiries made by teachers and care committee members as to suitable occupation for leavers has resulted in the drawing up of lists of suitable occupations for boys and girls. It must be understood that this list relates to London conditions only. Two grades of work are shown—those most suitable and those of secondary suitability :

Boys : First selection—Nursery gardening, poultry farming, messengers, assurance agents, travellers and canvassers, rent collectors, hawkers and street traders, shopwork under good conditions, and piano-tuning. Second selection—Stick and pipe mounting, basket-making, and some branches of brush-making.

Girls : First selection—Florists' work, waitresses in tea shops, dairy shops, under nursemaids (no sewing), crèche attendants, helpers at mothers' schools, helpers at special schools and dining centres, and light warehouse work (packing). Second selection—Box-making, cork sorting, envelope folding (cementing and black-bordering), show-card mounting, some branches of brush-making, and stockroom work.

The kinds of work placed in the first and most suitable selection are of the outdoor type, or those that enable the worker to be out and about, standing and moving, and with a minimum of close eye work. These kinds of work are doubly suitable, for the general health is likely to be better for the freedom of movement enjoyed, and with the improvement in the general health the state of the eyes is likely to be benefited. Next come the second selections. All these are light tasks, that do not unduly involve the use of the eyes ; but they necessitate sitting and stooping to some extent and therefore are not so good for the body or the eyes. Looked at from the occupational point of view it is evident that the teaching of handicraft in the myope classes is not a direct preparation for life work, such as is understood by the handicrafts of a blind school, rather the work should be regarded as a convenient peg on which to hang general instruction ; the work itself is of value as a training in method and habits of precision, and as cultivating satisfactory habits in the use of the eyes. The work is of value also in that it tends to engage the minds of the children with the possibility of creating things and of fostering thought and observation, and to that extent withdrawing them from the fatal snare of living in a world of reading

and book-thinking. The manual work is therefore both a discipline and a distraction.

If any comment be needed upon the satisfactory nature of these classes, it could best be found in the steadily increasing interest shown by the ophthalmic surgeons who have to do with the eyes of the elementary school children in the county in which the scheme has been most exploited. There is a steady increase in the number of children referred by the hospital surgeons "for education in a myope class."

A CASE OF EXTRA-GENITAL PRIMARY CHANCRE OF THE WRIST.

By GEORGE PERNET, M.D.,

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In the course of my professional work I have seen a fair number of extra-genital primary chancres in children, but I do not remember to have ever seen one on the wrist until June of this year, when a case of that kind presented itself in my clinic. Usually in children the original syphilitic sore is about the mouth or lips, the result of that stupid habit of promiscuous kissing of children by relatives and strangers, or of sexual aberrations. In a lecture to graduates at the old Polyclinic (1) I brought together a number of cases, insisting on the strange ways in which syphilis might be accidentally contracted or communicated. That the notion of such accidental infection cannot be brought to mind too often is plainly demonstrated by the fact that extra-genital chancres are still frequently overlooked for one reason or another.

To call such accidental infections cases of *syphilis insentium* is beside the mark, for as medical men we have nothing to do with such questions as the guilt or innocence of a patient when approaching morbid problems.(2) Our business is to make a correct diagnosis and employ suitable treatment in order to cure, or at any rate relieve, the sufferer. I make no apology for insisting on such points of common knowledge. There is much too much tendency on the part of medical men to pose as moral censors and to soar into the transcendental.

That cases of extra-genital chancres should from time to time be published is therefore obviously important, not only from the point of

view of early treatment, but also to prevent the spread of the disease to others in the home and out of it.

The present case relates to a lad of 15, who came under observation for a widespread papulo-lenticular rash affecting the face, trunk, and limbs, and quite characteristic of syphilis. In addition there was multiple adenitis and also typical syphilitic ulceration of the throat. The patient was pale and looked ill. There was no headache, a symptom of importance in adult cases, especially in women.(3)

There was no sign of a primary sore about the genitalia, which were carefully examined from the exclusion point of view, for my suspicions whilst examining the patient generally had already fallen on a raised convex lesion, the size of sixpence or so, situated on the radial side of the flexor surface of the right wrist. This was under a simple dressing and was only displayed when that was removed. Here it is well to insist on the removal of dressings when confronted by an early syphilitic rash. Years ago, I learnt the importance of such a step.(4) It was the case of a man, with an undoubted early syphilitic eruption and adenitis, but no trace about the glans or genitalia of a primary sore. But I noticed his left hand was bandaged and on making him remove the dressings, which he did reluctantly, I found an absolutely typical primary chancre of the pulp of the left middle finger, which was being fomented in the casualty department of the hospital under the impression that it was an ordinary whitlow. This is a common mistake in the case of primary sores of the fingers and has been made over and over again. At the time I mentioned this fact in a lecture to the Students' Society. A few days after, one of the house-surgeons, who had been present, informed me he had found and diagnosed a primary chancre of the finger in a casualty case that turned up the very next day to my lecture, and that his diagnosis was the result of my having called his attention to the possibility of such an occurrence. In practice, always have the possibility of syphilis at the back of your mind.

But to return to our wrist primary chancre; the diagnosis was confirmed by the induration and by the fact that the corresponding axillary glands were greatly enlarged *en paquet* and hard, and quite different from the mild degree of adenitis in the opposite axilla. The corresponding epitrochlear gland was not involved. This could be explained, I think, by the fact that the primary chancre was situated on the *radial* side of the wrist. Had it been on the *ulnar* side, then the epitrochlear would have been affected. Nor was the opposite epitrochlear involved, it may be said in passing.

As to the origin of the primary sore, the syphilitic infection had occurred after slight injury to the wrist—a scratch from a piece of wire (molybdenum—the patient was an electric lamp wire drawer)—which had “festered.” This had taken place three months before the patient was first seen, when he gave about two weeks as the duration of the rash. Infection had found its way in through the open door subsequently to the occurrence of the original scratch. This points to the importance of attending even to small solutions of continuity in the skin and should be taken to heart by medical men in active practice, especially at such a time as this, for war, as is well known, brings venereal disease in its train.(5)

The only clue as to the origin of the syphilis was the statement that a man with a bad skin rash had lodged in the house. This man I was not able to examine.

The original injury had not been sucked by anyone, a point of some interest, as good Samaritans with mucous plaques of the mouth have infected others in this kind of way.

The lad was given 0.15 of neo-salvarsan, the only small dose available. I took the patient's age into account and did not desire he should have an ordinary dose, especially as the neo-salvarsan available in the hospital at the time was of English make, and according to some writers this make had given rise to severe reaction. In my case, though only 0.15 was injected, the reaction was a smart one, and the temperature went up to 104° F.

It will no doubt be asked, in the stereotyped way, how about the blood? Although there could not be the slightest doubt about the diagnosis of syphilis on clinical grounds, a blood-test was done from the point of view of its interest merely. It was positive. But I should like to state here, and to repeat, that the Wassermann may be fallacious. The clinical facts, that one can gather by sight and touch, are the important points that matter, whatever the result of the blood-test may be. There is a great tendency to neglect clinical training, and to fall back, with unpleasant results sometimes, and rely on laboratory methods alone. They may prove broken reeds if one pays no attention to the clinical aspects.

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A CASE OF EXTENSIVE PIGMENTED AND HAIRY
NÆVUS WITH MOLLUSCOUS TUMOURS.

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THE patient is a girl, aged 8 years, the eldest of four children. The father and mother are healthy, and there is no family history of birth marks or deformities. The child was born at full term by normal labour. There was no history of maternal impressions, and the mother has had no miscarriages.

At birth the face, trunk, and limbs were covered with dark reddish-brown marks, which have since grown larger in proportion to the growth of the child.

Present condition.—Almost the whole of the cutaneous surface is covered with pigmented patches, varying in colour from reddish-brown to dark blackish-brown; some are covered with long and abundant hair, while others are smoother and show shorter hairs.

The skin of the back, especially along the spine, shows a very dark pigmentation, and is covered with coarse long hair. The skin of the left leg is also very dark and hairy, both front and back. In the unaffected areas, which are chiefly seen on the forearms and back of the right leg (*v.* Fig. 1), the skin is in excellent condition.

On the left arm and leg, which are thinner than the right, the lesions are more pronounced than on the opposite side. The left upper arm is most wasted, and here the whole of the skin is diseased, and resembles a monkey's in texture.

In addition to the nævi the child presents a number of molluscouc tumours. The largest, which is about 4 in. long, is attached to the inner side of the left buttock and perinæum on the left side (*v.* Fig. 1), and is divided into two lobes by a fissure midway along the perinæum. A second tumour is to be seen external and inferior to it in the midline of the buttock. A third growth arises from the mons Veneris (*v.* Fig. 2). Incipient molluscouc formation is also present in a large round patch on the right forearm just above the wrist, on a blackish-brown patch about 4 in. long, on the outer aspect of the right upper arm from the shoulder downwards, and on a similar though smaller patch on the corresponding area of the left shoulder.

Apart from the skin condition and the difference in size of the limbs on the two sides, the child presents no abnormality. She is intelligent and strong, and has always had good health.

The case of giant nævus recently shown by Dr. J. D. Rolleston (2)



FIG. 1.—Back view, showing distribution of the nævus and tumours of the buttock.

at the Children's Section of the Royal Society of Medicine has several features resembling my case, but the lesions were much less extensive, and though a few warty growths were present, there were no large molluscosus tumours. Dr. Rolleston has drawn my attention to a paper by H. Fox (1), of New York, entitled "A Case of extensive Pigmented and Hairy Nævus of the 'Bathing-trunk Type' presenting Genital Tumours." In this case in addition to the nævi

there were two rounded molluscous tumours on the back, one in the right inguinal region, and three attached to the labia majora.

Fox has collected ten other cases of extensive nævus from literature associated with similar tumours.



FIG. 2.—Side view, showing distribution of the lesions and tumour of mons Veneris.

In cases of this kind extensive treatment is impossible, but Fox suggests that some improvement may be obtained in the lesions in the face and hands by the use of nitric acid, phenol, or carbon dioxide snow.

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Philadelphia Pediatric Society.

February the 9th, 1915, W. N. BRADLEY, M.D., President.

The Mode of Infection and Ætiology of Epidemic Poliomyelitis.

—Dr. SIMON FLEXNER, of the Rockefeller Institute, New York City (by invitation), delivered this address. The two problems of uppermost interest in respect to epidemic poliomyelitis are, first, the mode of infection, and second, the nature of the specific micro-organism causing the disease.

Two views are entertained regarding the mode of infection; according to one, the infectious agent of the disease is communicated by personal contact; according to the other, it is conveyed by the stable fly. The differences involved in these two conceptions are fundamental, and hence the practices for the prevention of the malady based on them must be wholly different if they are to achieve the result desired. For that reason it is imperative that the validity of the two doctrines be carefully scrutinised and appraised.

Examine first the evidence available bearing on the insect conveyance of the disease. This notion was suggested in the first place by the seasonal prevalence of epidemic poliomyelitis, which is predominantly a disease of midsummer and early autumn. However, it is not, strictly speaking, thus narrowly limited in incidence, since cases occur in the spring and even in the winter months, although these are few in number.

In the second place, the notion is supported by the rural character of some epidemics, as well as by the relatively wide distances which separate many of the cases. In these instances, however, the peculiarities are of degree rather than kind. Epidemics of poliomyelitis prevail also in towns and cities, and cases may be closely associated as well as widely separated.

The notion of insect carriage received for a time the support of experimental evidence, without which it would have remained merely a suggestive possibility; and the wide currency which this notion has obtained among the laity depends wholly on an imperfect experimental foundation which has now been largely disproved.

At the Congress of Hygiene and Demography, held in Washington in 1912, Dr. M. J. Rosenau, of the Harvard Medical School, announced that he had succeeded in communicating experimental poliomyelitis to several monkeys by permitting stable flies to feed first on monkeys inoculated intracerebrally with the poliomyelitic virus, and then on normal monkeys. Although the studies which he reported were then incomplete and he made his announcement in a judiciously tentative fashion, he expressed the opinion that the flies might carry the infective agent, and also that in conveying it from one human being to another an intervening period of time was necessary, during which the virus underwent some change of development within the insect host. This announcement was followed very quickly by a confirmatory one emanating from Anderson and Frost of the United States Public Health Laboratory in Washington.

No satisfactory explanation of the successful experiments performed by Rosenau and by Anderson and Frost has thus far been offered, since in no other instance have confirmatory results been obtained. The great importance of the subject led immediately to a repetition of the experiments in several laboratories in this country and in certain laboratories abroad without yield-

ing a single instance of positive infection. Moreover, Anderson and Frost themselves a little later announced that they had failed subsequently to repeat their earlier successful experiments.

Without pursuing this topic further, we may now turn our attention to the other conception, namely, that infection in poliomyelitis is conveyed through personal contact. In considering that view of the mode of infection it is necessary at the outset to have an understanding of the clinical types of poliomyelitis. So long as the affection was conceived of as a frankly paralytic disease in all instances, it was impossible to trace the connection of cases one with another, but once it was determined—as was done by Wickman—that epidemic poliomyelitis assumes non-paralytic and ambulant forms, the subject of the mode of infection was opened up to re-study and to a wholly new interpretation.

The proof of the existence of abortive and ambulant forms of poliomyelitis is not clinical merely, but depends also on laboratory findings. The several laboratory findings may be stated briefly to be the following: the detection of changes in the cerebro-spinal fluid; the demonstration of neutralising immunity principles in the blood; and the determination of the presence of the virus of poliomyelitis on the upper respiratory mucous membrane. The changes in the cerebro-spinal fluid consist of increased cellular content and the presence of globulin; the two conditions may coexist. The new cells are chiefly lymphocytes. The neutralising properties of the blood depend on the appearance in the serum of immunity principles, absent from the normal blood, which correspond to similar immunity principles arising after a frank attack of paralytic poliomyelitis. The virus of the disease has been detected on the nasal and pharyngeal mucous membrane in such quantity and quality as to make possible the communication of poliomyelitis to monkeys. The unmistakable demonstration, both by clinical observation and laboratory tests, of the existence of abortive and ambulant cases of epidemic poliomyelitis—many of which may and do escape detection—indicates how wide, indiscriminate, and unsuspected the distribution of the virus by personal contact may readily become.

But the facts now in hand carry us beyond the distributing power exercised by the frank and abortive ambulant cases, since it can now be affirmed that epidemic poliomyelitis is one of the diseases in which both healthy and chronic carriers of the microbic agent of infection arise. The few healthy carriers thus far detected consist of persons who have been in very close and intimate contact with persons acutely ill with poliomyelitis; for example, the parents of a paralysed child. The few instances of chronic carriers now known consist of persons who have recovered from an acute attack, but in whom at the expiration of several months the virus has been detected, by animal inoculation, on the upper respiratory mucous membrane. The two classes last mentioned of potential carriers of the infectious agent add materially to the possibility of wide dissemination of the virus.

It is very important, now that the existence of healthy and chronic carriers of the infectious agent of epidemic poliomyelitis is established, that there should arise undue concern regarding the dangers of conveying the disease, while the fact should not be taken into account in devising measures for the prevention of the conveyance. Possessing as we do at present only the important means of animal inoculation for detecting the virus of poliomyelitis, still it appears that the healthy and chronic carriers are not more numerous in this disease than in many other infections of more common occurrence.

Given, therefore, the possibility of the distribution of the virus being affected by, first, the frankly ill; second, the slightly ill; third, healthy, and fourth, chronic carriers, the striking discrepancy noted between the prevalence of cases in small, sparsely populated rural communities and the more thickly populated towns and cities at once disappears.

To sum up the aspect of the subject concerning the mode of infection, we may now state emphatically that the indications are all in favour of personal communication of the virus. Hence the measures which we seek to put into effect against the occurrence and spread of epidemic poliomyelitis should now be based on the conception of the personal factor as paramount, and not on the notion of insect carriage.

As to the problem of the nature of the virus or micro-organism causing epidemic poliomyelitis, you will recall that the virus is filterable; that is, it passes through the pores of earthenware filters which exclude under similar conditions the ordinary bacteria. We are now acquainted with a score or so of diseases in man and animals definitely proved or believed to be caused by parasites belonging to this filterable class. It is self-evident that these parasites are very minute; and because of their minuteness it has until recently been doubted whether they had actually been viewed under the microscope.

About two years ago, Noguchi and Flexner announced that cultures of a very minute organism had been obtained which might be regarded as the possible microbic agent of epidemic poliomyelitis. The cultures were derived from the central nervous organs of human beings and monkeys who had had poliomyelitis. As evidence of the nature of the cultures it could then be stated that experimental poliomyelitis had been produced in monkeys by inoculation of the cultures. We have recently confirmed this result in an interesting manner. The culture employed for inoculation had been isolated about eighteen months before and had gone through a number of generations in artificial mediums. It was cultivated finally in a mixture of ascitic fluid and broth, and the fluid carrying large numbers of the micro-organisms—which are of extremely minute size—was injected, in some cases intraspinally, in others intracerebrally and intraperitoneally, into rhesus monkeys. The injection produced no immediate effect; indeed, a single injection causes no effect whatever. But when the intraperitoneal and intraspinal injections are repeated three or four times the animals develop paralysis, and the paralysed animals show the peculiar histologic changes of the central nervous system indicative of poliomyelitis. In other words, these experiments showed that a culture of the micro-organism mentioned, long removed from the nervous tissues, is capable of causing infection of monkeys, and that by this means the symptoms and lesions of epidemic poliomyelitis are produced.

The fact that several inoculations of the culture were required to cause infection agrees with observations previously made by Lewis and Flexner, that when a subminimal dose of the usual virus of poliomyelitis is injected into monkeys, no effect is produced; but when the subminimal injections are repeated, paralysis may suddenly supervene. The two sets of observations are, therefore, in accord.

From the foregoing we must believe, first, that the agent of epidemic poliomyelitis is carried by persons, not insects, and communicated by them in such manner as to gain access to the upper respiratory mucous membranes of other persons, among whom a portion, being susceptible to the injurious action of the virus, acquire the infection and develop the disease.

The clinical variety or form of the disease which they develop may be frankly paralytic, the meningitic, or the abortive and ambulatory, in which no severe symptoms whatever appear. But however the persons may be affected, they become potential agents of dissemination of the virus of poliomyelitis, as do a number of healthy persons who have been in intimate contact with those who are ill, and another group of persons who have recovered from an acute attack of poliomyelitis. These several classes of infected or contaminated persons constitute the active means through which the virus is spread and to the control of which sanitary measures designed to prevent epidemics must be directed.

Finally, the virus or microbic agent of epidemic poliomyelitis appears now to have been cultivated and to consist of minute globular bodies, capable of being distinctly viewed under the high powers of the microscope.

Abstracts from Current Literature.

Nervous and Mental Diseases.

The tendon reflexes in infancy and childhood (*Jahrb. f. Kinderheilk.*, 1914, LXXX, p. 423).—**J. Vas** examined 200 healthy children, aged 2 weeks and upwards, and found the knee-jerks present in 98·8 per cent. and the tendo Achillis jerks in 85·7 per cent. He concludes that knee reflexes act in the same manner in infancy and childhood as in adult life. In the few cases in which the tendo Achillis reflexes were not obtained their absence could be attributed to the method of examination, restlessness of the child, and so on. The following method is recommended for examining the tendo Achillis reflex. Place the child on its side on a table facing its friends to divert its attention. Take its foot with the left hand, the index on the tendo Achillis and the thumb on the sole, so as to put the tendon on the stretch, and hold the back of the foot with the remaining three fingers of the left hand, and strike the tendon with the right hand.

J. D. ROLLESTON.

Generalised neuro-fibromatosis (von Recklinghausen's disease) (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1358).—**C. A. Elliott** and **A. F. Beifeld** report the case of a boy, who, when about 10 years of age, began to suffer from "lumps" in both cervical regions. Subsequently countless nodules appeared all over the body, and the liver and spleen were enlarged. A diagnosis of Hodgkin's disease was made at first, but on the patient coming under the writers' care, microscopical examination of the tumours revealed the true nature of the disease. The authors are of opinion that von Recklinghausen's disease is connected with the *status lymphaticus* and abnormalities in the ductless glands.

T. R. WHIPHAM.

Landry's paralysis (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1845).—**E. D. Fisher** reports the case of a boy, aged 15 years; previous history negative. September 27, 1913, he complained of pain and weakness in the lower extremities, which increased in severity until October 11, when he was admitted to hospital. Examination of the heart and lungs and abdominal organs was negative. There was paralysis of the lower extremities, with loss of reflexes and tenderness over the larger nerve trunks. No anæsthesia.

The urine was negative. The spinal fluid was clear; Fehling's reduction test was positive; the globulin was slightly increased; cells were 7 per c.mm. Smears and cultures for bacteria were negative. The Wassermann was negative; throat cultures negative. An examination of the blood showed 23,500 white cells, with 86 per cent. of polymorphonuclears, 2 per cent. of transitionals, and 12 per cent. of lymphocytes. October 17 there was paralysis of the external rectus of the left eye. The eye grounds were negative. The weakness gradually extended to the upper extremities, with loss of power, which in the course of a week became complete in the hands and arms. October 29 there was difficulty in swallowing and complete paralysis of the muscles of the right eye and of the superior oblique of the left eye. November 7 there was dyspnoea and difficulty in swallowing. Ail of these symptoms gradually increased in severity, and death occurred November 21 from respiratory failure. The necropsy, macroscopically, showed intense congestion of the cord; no other lesion. Microscopically, there was an interstitial neuritis of the sciatic nerve and congestion of the anterior horns, without perivascular infiltration or meningeal involvement. The medulla showed involvement of the cranial nerve nuclei and degeneration of the axis cylinders for a short distance from the cell body. The whole picture differentiated it from poliomyelitis.

T. R. WHIPHAM.

Congenital agenetic forms of the neuro-muscular system (*Riv. di Clin. Pediat.*, 1914, xii, p. 562).—**L. Concetti**, at the Pædiatric Congress held at Bologna in September, 1913, dealt with acquired degenerative changes in the neuro-muscular system in children, and which tend to become worse, in contrast to other rarer syndromes which are congenital and which tend to improve. These latter are observed in children who are born with a high degree of anatomical and functional defect, and in them the anatomical element is arrested in its physiological development. Hence with increasing years these children improve, because the nervous or muscular system tends towards complete and normal development. The form of agenesis longest known is that affecting the cerebral cortex and the respective cortico-spinal neurons (Little's disease); more recently described is the muscular atonia of Oppenheim, affecting the peripheral neurones of the spinal cord. A third part of the nervous system which gives rise to agenetic forms is the bulb, as shown in children who for a more or less lengthy period are affected with disturbances of deglutition. With regard to tabeto-cerebellar forms there is the case described by the author in 1911, that by Oppenheim in the same year, and two by Taylor in 1913. They were children who from birth presented the characteristic type of attitude and unstable movement with ataxia, tremors of the limbs, tendency to fall backwards, inco-ordinate active movements of the upper and lower limbs, slow speech, brisk reflexes, normal intelligence, and absence of muscular atrophy; slow spontaneous and progressive improvement occurred. The author describes two cases under his own observation in which the muscular system was implicated, under the name of "primary congenital familial amyoplasia." Reference is also made to forms of arrested or deficient development of ossification. The author concludes that while in acquired forms there are degenerative changes in already formed elements, in these congenital forms there are agenetic aplastic changes in which the constructive elements are not formed, or are formed with more or less delay, or in which their formative activity is arrested. As regards ætiology, a toxic influence may have occurred during intra-uterine

life, or there may have been changes in endocrinous secretions, so that besides injections of lecithin, iron, arsenic, and phosphorus, opotherapy may be tried as a curative agent.

VINCENT DICKINSON.

An unusual form of birth palsy (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 2282).—**A. Gordon** reports the case of an infant who was born as a breech presentation, forceps being applied in the mento-occipital position for a final delivery of the head. In both forearms there was a symmetrical palsy of the flexors of the wrists. The child could elevate, abduct, adduct, rotate, pronate, and supinate the arms and forearms, but the wrists remained extended in all these movements. The fingers were all flexed as in a normal condition. Evidently the two branches of the median and ulnar nerves supplying the flexor carpi radialis and flexor carpi ulnaris, respectively, became involved during the accoucheur's manipulation. The damage was done to those filaments of the seventh and eighth cervical roots which enter into the formation of the ulnar and median nerves, but which become separated from the main trunks at the level of the upper third of the forearm to enter the corresponding muscles.

T. R. WHIPHAM.

Infantile hemiplegia (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1577).—**H. W. Wright** records the case of a male infant, aged 19 months, who had once bled rather profusely from a very slight cut. Within a period of a little over three months the child had five transient attacks of hemiplegia on the right side, from all of which he recovered. The Wassermann and von Pirquet tests were negative. The writer considers that the most likely diagnosis was hæmorrhage from the lenticulo-striate artery into the middle portion of the left internal capsule and lenticula.

T. R. WHIPHAM.

Cerebral hæmorrhage (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1028).—**W. W. Mott** reports the case of a girl, aged 3 years, who accidentally fell backward down several steps, striking her head on the pavement. Afterwards she was able to stand and walk, and finally went to sleep naturally. An hour and a half later she awoke, vomited several times and appeared dazed. A twitching of the left arm was noticed, and there was a contusion over the right mastoid region. The pulse became rapid and the respirations shallow and irregular. Convulsive movements appeared in the right arm and leg, the eyes were turned to the right, and the pupils did not react. Evidently there was intracranial hæmorrhage over the right motor area. Trephining was performed without an anæsthetic, and the ascending frontal branch of the middle cerebral artery was found to be ruptured, giving rise to considerable hæmorrhage. The vessel was tied and the wound closed with a narrow drain. The symptoms ceased at once, and the patient made an uneventful recovery.

T. R. WHIPHAM.

Tumour of the crus cerebri (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1662).—**J. H. W. Rhein** reports the case of a coloured girl, aged 12 years. The family history was negative. There was no history of tuberculosis, syphilis, or mental disease. Both parents and one brother were well. Her birth had been normal, and the child developed normally, physically and mentally. As an infant she suffered from measles, chicken-pox, and whooping-cough. Two years previous to admission she had suffered from an attack of typhoid fever, and in the previous summer had had a

second attack, which her parents stated was associated with malaria. Two years previously she partly lost the use of her right arm and hand, and after an attack of typhoid malaria eighteen months later the right leg became weak. Two months ago there developed pains over the left eye which radiated to the left ear, and ptosis of the left eye. During the two weeks before admission to the hospital she had vomited every morning immediately after breakfast and had convulsions of the right side of the body lasting two or three minutes and recurring several times during the day. She was stuporous during the attack, but regained consciousness immediately after the twitching ceased. There had been for four months difficulty with the rectal and vesical sphincter, the latter consisting of difficulty in emptying the bladder. The patient was a poorly nourished girl. The physical examination of the heart and lungs proved to be normal. The liver and spleen were not enlarged, and there were no palpable masses in the abdomen. There was paralysis of the right side of the face in the lower distribution of the facial nerve. The patient moved the left side of the face and both sides of the forehead well, and closed both eyes equally well. There was some rigidity of the neck when rotary or to-and-fro movements of the head were made. The pupils did not react to light or in accommodation. In making an effort to follow an object to the right, the right eyeball did not move beyond the median line and the left eyeball moved only a slight distance to the right. In following an object to the left the right eyeball moved to the inner canthus and the left eyeball remained motionless. In following an object upward neither eyeball moved at all. In following an object downward the right eyeball moved only slightly and the left eyeball not at all. The tongue protruded markedly to the right. The patient winced when the face was scratched with a sharp point on both sides. The finger to nose test showed marked ataxia on the right side and slight on the left. In the right arm there was marked contracture of the biceps muscle which caused flexion of the forearm on the arm. She could not voluntarily extend the forearm. The grasp of the right hand was almost *nil* and was feeble on the left side. Rotary movements of the right arm could scarcely be made at all. The left arm was feeble, but all movements were possible. There was no diadokokinesia. In walking she dragged the left leg, although both legs appeared to be weak. Both knee-jerks were exaggerated and equal. There was no ankle-clonus, but the Babinski sign was present on both sides. The toes on both sides were hyper-extended, especially on the right. Weakness of the legs prevented a satisfactory test for diadokokinesia. An examination of the eye showed intense swelling of the nerve-head and surrounding retina with a few scattered hæmorrhages. Later the pupils became unequal, the right being smaller than the left, and the left eyeball protruded more than the right. A diagnosis of tumour of the upper part of the pons was made. *Necropsy*: The left crus cerebri was very much enlarged and extended to the right of the median line. On section it was found that the enlargement was due to a caseous tumour which extended to the upper limit of the pons below and the basal ganglia above. The internal capsule was somewhat implicated in its anterior limb, and the optic thalamus was also apparently involved in its anterior third. The focus in the pons extended to the opposite side to a slight degree. There was also a small focus of circumscribed caseation in the white matter of the frontal convolution on the left side situated half an inch to the outside of the caudate nucleus. On microscopic section the tumour proved to be a tubercle.

T. R. WHIPHAM.

Tuberculous tumours of the brain (*Am. Journ. Dis. Child.*, 1915, ix, p. 508).—**E. B. Friedenwald** and **W. Greenfeld** summarise the literature and report a personal case in a boy, aged 6 years. In June, 1912, he had a convulsion, and was said to have passed a round worm. The blood showed a marked eosinophilia, and Wassermann's reaction was positive. Santonin and calomel were given, but he did not pass any more worms, and five months' anti-syphilitic treatment had no effect. The convulsions became more and more frequent, always coming on with twitchings of the right arm and leg. Death, preceded by signs of pneumonia, took place in January, 1913, about seven months after the onset. The autopsy showed tuberculous pneumonia of the right lung and a general miliary tuberculosis. The cerebral meninges were congested and opaque, and the left hemisphere showed a large mass situated in the ascending parietal and partly in the superior marginal and superior parietal convolutions opposite the leg trunk and arm motor centres. Four masses of various sizes were found in the right hemisphere, three on the surface and one on section. Histologically all the masses showed the ordinary changes produced by the tubercle bacillus. Great masses of tubercle bacilli were found in the vessel walls and in the lumen of the vessels in the tubercles of the brain and bronchial lymph glands. The authors have been unable to find any other case in which tubercle bacilli were present within the blood-vessels. A search was made for the *Spirochæta pallida* in the diseased organs with negative results.

J. D. ROLLESTON.

Encephalitis and acute ataxia (*Arch. de Méd. des Enf.*, 1914, xvii, p. 561).—**L. Guinon** reports two cases in boys, aged 4 years, which occurred during the poliomyelitis epidemic of 1910, in each case after measles. Case 1: The first symptoms were sudden loss of the use of the legs without impairment of consciousness, headache, or vomiting. Subsequently there was gradual loss of intelligence, the language became that of a child of twelve or fourteen months old, with cries, restlessness, and stiffness of the neck and left side of the body. After these symptoms had lasted a fortnight there were six days of torpor, except that the child wept and showed defensive movements. The face was very red. There was general stiffness and exaggeration of the reflexes. There was also contracture of the right side of the face and left side of the body. There was no Kernig's sign, and the eyes were normal. These symptoms gradually subsided, and a period of aphasia and ataxia followed of about ten days' duration. Convalescence took place on about the thirtieth day, and in another ten days recovery was complete. Case 2: The first symptoms were headache, pain in the neck, and nuchal rigidity. The reflexes were slightly exaggerated, and the plantar reflex was extensor. For the first two or three weeks there was apparent unconsciousness, incontinence, continual whining, and almost complete inertia to stimuli, but without anæsthesia to pain. This period was followed by ten days' extreme restlessness, choreic movements of the head causing erosions. The legs were still stiff, but the child understood what was said. In the third phase rapid recovery took place. In both cases the normal condition of the cerebro-spinal fluid excluded meningial hæmorrhage and meningitis.

J. D. ROLLESTON.

Progressive lenticular degeneration (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1380).—**W. B. Cadwalader** reports two cases in men, aged 18 and 36 years, which began at the ages of fourteen and sixteen respectively.

The first case developed quickly, the initial symptoms being sluggishness, bad manners, a dribbling of saliva, and dysarthria. Mental deterioration and jerking movements became manifest later with a tonic spasm of the muscles of the eyelids and of the face. The muscles of the entire body also developed a state of hypertonicity causing a tendency to fall backward. There was no pain nor any sensory changes, and the reflexes were all normal. Case 2: The patient's mother had intermittent attacks of melancholia, and one sister and two brothers were affected similarly to the patient; one of the brothers was also mentally deranged. When the patient was aged sixteen a tremor first affected the right side. Muscular rigidity gradually spread to the muscles of the neck and later involved the entire body and all the extremities. There are constant involuntary movements which are increased by emotion or voluntary effort. Dysarthria is pronounced, but the speech is not scanning. The tendon reflexes are slightly exaggerated, but the others are normal. The Wassermann reaction is negative. For the last five or six years the disease has been stationary. All the viscera in both cases were normal.

T. R. WHIPHAM.

Streptococcus meningitis (*'Arch. of Ped.,'* 1915, xxxii, p. 28).—**P. L. Du Boys** and **J. B. Neal** record a case in a man, aged 26 years, secondary to otitis, successfully treated by intraspinal and intravenous injections of antistreptococcus serum, a streptococcus vaccine, and urotropine internally.

J. D. ROLLESTON.

Pneumococcal meningitis (*'Rev. Méd. del Uruguay,'* 1915, xviii, p. 1).—**L. Morquio**.—Pneumococcal meningitis is most frequent in infancy, unlike cerebro-spinal meningitis, which is common in older children. In the clinical characters there is also some difference in the two diseases. In cerebro-spinal meningitis the onset is sudden and the meningeal symptoms are marked; in pneumococcal meningitis the onset is usually secondary to pneumonia or otitis, and the meningeal signs are less marked. Herpes, common in cerebro-spinal meningitis, is rare in pneumococcal meningitis. The cerebro-spinal fluid in meningococcal meningitis is more purulent as a rule than in pneumococcal meningitis. A clear fluid may be found in pneumococcal meningitis, although after centrifugalisation it may show a fair number of cells. A turbid fluid may also be found with few cells, but many pneumococci. There are various forms of pneumococcal meningitis: viz., fulminant, prolonged and comatose forms with rapid course. The prognosis is graver than in meningococcal meningitis. Treatment consists in lumbar puncture repeated daily or every second day until the fluid comes out slowly, warm baths at 100° F. for five to ten minutes two or three times a day, and urotropin internally in doses of 7½ to 15 gr. daily.

J. D. ROLLESTON.

Some features of pneumococcus meningitis (*'New York Med. Journ.,'* 1914, c, p. 895).—**A. Gordon**.—First, the specific micro-organism may not be detected in the cerebro-spinal fluid during life, rendering diagnosis difficult. Secondly, a purulent or sero-purulent exudation is most usually found on the vertex, but occasionally also at the base. The pus is not thick but viscid. Occasionally the exudation is serous. Thirdly, there are some cases where the nervous symptoms are either absent or do not suggest meningitis, and in cases of pneumonia meningitis may be found post mortem

when there have been no nervous symptoms during life. Gordon quotes a case of purulent meningitis in which this was the case, and pus was found both on the vertex and base.

J. PORTER PARKINSON.

Recurrent meningitis, due to lead, in a child, aged 5 years (*Am. Journ. Dis. Child.*, 1914, VIII, p. 377).—H. M. Thomas and K. S. Blackfan.—A boy, aged 5 years, was admitted to hospital in a state of coma. All the symptoms pointed to a serous meningitis of unknown origin. After a time he recovered. Six months afterwards he returned for frequent epistaxis, and three months later he was again admitted for coma with a bright lead-line on the gums. It was discovered he had been in the habit of biting the white lead paint from the railings of his cot. He recovered from this attack, but three weeks later he had a severe convulsion and died. No post-mortem. The literature of the subject is considered, and the authors consider lead has a special effect on the meninges and central nervous system.

F. R. B. ATKINSON.

Hydrocephalus (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 816).—R. J. E. Oden puts forward the suggestion that hydrocephalus may be caused by a contracted pelvis in the mother which during labour causes compression of the child's head sufficient to occlude, if not obliterate, the aqueduct of Sylvius. In favour of his proposition he quotes the case of a woman who was found to have a contracted pelvis. Her first child was undersized at birth, and although the labour was very difficult it terminated normally and the child remained healthy. Her second and third children developed hydrocephalus, but the fourth was delivered through a Cæsarean section with a favourable result.

T. R. WHIPHAM.

A case of pseudo-meningocele (*La Clin. Infant.*, 1914, XII, p. 449).—Zuber and Chatelin relate the case of a male infant, aged 5 months, born at term by forceps—vertex presentation. At the anterior superior angle of the right parietal there was a prominence the size of an apple. It appeared situated on the skull, which was otherwise normal. The skin was normal, but when the child cried the swelling became distended, the skin red, and the veins prominent. On palpation the swelling was tense and fluctuating. An aperture in the bone with irregular edges could be felt, about 8 cm. long and 4.5 cm. wide, directed obliquely and situated about 1 cm. from the sagittal suture. The parieto-frontal suture was intact. Against the hypothesis of true meningocele was the situation of the tumour, it being quite exceptional to see meningocele, due to congenital malformation from arrest of development, situated at the anterior superior angle of the parietal. Anterior meningoceles are only found on the line which corresponds in the embryo to the first bronchial cleft. The bony orifice from which a meningocele issues is small, with smooth and regular edges; in this case the orifice was large with irregular and thickened edges. Probably the case was one of pseudo-meningocele spuria traumatica of Billroth, in which either some fracture of the parietal had been caused by the use of forceps or an intra-uterine or post-partum fracture. In these subcutaneous fractures the bony edges remain ununited and thickened, and through the orifice thus formed the cerebro-spinal fluid issues, raising up the dura mater and the cutaneous layers which remain normal.

VINCENT DICKINSON.

The voice sign in chorea (*Amer. Journ. Dis. Child.*, 1914, VII, p. 422; *ibid.*, 1914, VIII, p. 579; *ibid.*, 1915, IX, p. 132).—W. B. Swift made over

500 observations of the voice with the kymograph in twenty cases of chorea and found that the voice change consisted in a variation in two vocal elements, a rise in pitch and an increase in intensity accompanying the choreic movements. The technique for eliciting the sign is to make the patient sound a prolonged "a" as in "are," and to watch for the changes in vocal pitch and intensity. The test may have to be applied four or five times before the voice-sign shows. Sometimes it occurs the first time tried and regularly every time. Rarely, ten trials are necessary.

J. D. ROLLESTON.

A study of the ætiology in one hundred and seventy-five epileptic children (*Boston Med. and Surg. Journ.*, 1914, CLXX, p. 521).—**A. W. Fairbanks**.—In only twelve instances was there pronounced hereditary taint, which supports the author's contention that the hereditary factor is slight. In forty-three cases there were conditions during the birth of the children which exposed the brain to great danger. F. R. B. ATKINSON.

A case of infantile tetany (*Med. Journ. of Austr.*, 1914, I, p. 445).—**M. J. Plomley** describes this case in a child, aged 46 hours. Four of the parents' children seem to have died from the same disease. This infant was treated by various drugs, the most valuable being adrenalin, with success.

F. R. B. ATKINSON.

The cause and cure of night terrors in children (*Arch. of Ped.*, 1914, XXI, p. 906, and *Med. Press*, 1915, I, p. 369).—**T. A. Williams** relates a series of cases to show the great sociological importance of conditions purely psychological, and to show that these can be removed with precision by physicians who are trained in doing so.

J. ALLAN.

Trichotillomania (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 2126).—**R. L. Sutton** records two cases, one a boy, aged 14 years, who were the subjects of trichotillomania, or the abnormal desire of forcibly extracting their own hair. Allied to this is dermatothlasia, or an ungovernable desire to rub, scratch, or irritate the skin on one or more parts of the body, of which an instance is also given. The patients were all of a neurotic temperament, and treatment was of little avail.

T. R. WHIPHAM.

Trichotillomania (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1236).—**J. C. Martin** records the case of a boy, aged 4 years, who about a year ago acquired the habit of jerking hairs out of the left side of his scalp. The habit has gradually become worse and may possibly be checked by shaving the scalp. The patient has never suffered from chorea or spasms of any kind.

T. R. WHIPHAM.

Insanity in children (*Am. Journ. Insanity*, 1914-15, LXXI, p. 471).—**J. H. W. Rhein**, in a study of 44 cases, finds that the manic type of manic depressive insanity occurs most frequently in children. Hallucinations occur only after the acute infectious fevers. Systematised delusions are uncommon. All his cases recovered from their attacks. One case of melancholia in a girl, aged 11 years, is described. She had epileptic fits. During preparation for confirmation she became depressed and imagined that she had been guilty of committing many sins. These symptoms lasted for a month and then completely subsided. Another case of melancholia occurred

in a boy, aged 13 years. This was of longer duration, and complete cure did not result. There was a history of traumatism.

CHRISTOPHER ROLLESTON.

Juvenile psychosis (*Journ. Amer. Med. Assoc.*, 1914, LXIII, p. 1283).—**H. H. Drysdale** remarks on the small number of cases recorded, but believes that this is a very much more prevalent disorder than is usually conceded. He reports the case of a boy, aged 11 years, who had been somewhat too religiously brought up. Until the age of seven he appeared normal, but as he grew older his mental condition changed, and he developed hallucinations and other psychical phenomena. Isolation and a course of hot packs brought about a marked improvement. His home surroundings were made happier and more congenial, with the result that he has since continued in good health, both physically and mentally.

T. R. WHIPHAM.

Surgery.

The operative treatment of cleft palate (*Lancet*, 1915, I, p. 479 and p. 533).—**H. Blakeway** discusses this subject at considerable length and gives a tabular statement of 100 consecutive cases of cleft palate treated by Lane's operation, with their immediate and remote results. The different operations for this condition are considered, and the author concludes that Langenbeck's operation is still the best for routine use. The question as to the best age for its performance does not admit of precise answer. It is doubtful if any great advantage results from performing it during the first year of life, and it is certain that the prospect of success during the second or third year will often be better. Further delay is not usually necessary, but may in bad cases be advisable. Surgeons, who, a few years ago, were content to operate in the third year or later, now often perform median suture on children one or two years old. The experience of the operator, the width of the cleft, together with the height of the palatal arch and the general health of the child, have all to be considered before a decision is reached. If the condition is complicated by the presence of a hare-lip, closure of the latter during the first few weeks of life has a valuable effect in causing obliteration of the most anterior part of the cleft.

J. ALLAN.

Appendicular abscess in an infant, aged 13 months (*Arch. de Méd. des Enf.*, 1914, xvii, p. 773).—**Phélip** records a case in a female infant, bottle-fed, who had suffered from constipation since the age of 11 months. The symptoms were fever, diarrhoea, blood in the stools, and distension of the abdomen. A swelling could be felt in the right iliac fossa per abdomen and per rectum. The diagnosis lay between appendicitis and intussusception. A lateral laparotomy under chloroform was performed, and an appendicular abscess was found with a free stercoral calculus. Recovery was complete.

J. D. ROLLESTON.

Congenital intestinal obstruction (*Amer. Journ. Dis. Child.*, 1915, ix, p. 455).—**V. C. Rowland** reports a case in a first-born male child, aged 4 days, who had had no bowel movement since birth. On the second day it vomited dark yellow material resembling meconium, and again on the third day. On the fourth day the abdomen was very distended. Repeated soap-

sud enemata brought away no meconium or blood, but only a little mucus. Temperature, 102-100.5° F. General condition good. The abdomen was opened at 10 p.m. on the fourth day. The condition was found to be a complete twist of the mesentery of the small intestine with complete obstruction approximately at the middle of the small intestine. On untwisting, gas escaped through into the collapsed bowel beyond. During the night the child had two good bowel movements of meconium, and the next day about ten motions. The temperature, pulse, and respiration kept high, and death occurred about thirty hours after the operation. No necropsy.

J. D. ROLLESTON.

Intestinal obstruction due to sigmoid volvulus (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1744).—A. McGlannan reports an instance of this form of obstruction, which is unusual in a child. The patient was a girl, aged 6 years, who for two days had had abdominal cramp and diarrhoea, followed by vomiting and tenesmus. At the operation a volvulus of the sigmoid was discovered and relieved. Six weeks later the redundant sigmoid was resected and an anastomosis was performed. A slight leaking from one end of the bowel occurred, but the child made a good recovery.

T. R. WHIPHAM.

Thymectomy (*L'Echo Méd. du Nord*, 1914, XVIII, p. 176).—Gandier and Wery showed, at the Soc. de Méd. du Nord, a thymus removed for thymic suffocation from an infant, aged 10 months. Death occurred five days afterwards, due, the authors think (there was no section), to compression of the nerves by the remaining portion of the left lobe, which could not be removed.

F. R. B. ATKINSON.

Multiple cartilaginous exostoses—hereditary deforming chondrodysplasia (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1642).—A. Ehrenfried describes at some length a condition which is claimed to be a distinct clinical entity, and to which he gives the name deforming chondrodysplasia. The condition is characterised by (1) the occurrence of multiple, more or less symmetrical, cartilaginous and osteo-cartilaginous growths within and upon the skeletal system, generally benign, and resulting from a disturbance in the proliferation and ossification of the bone-forming cartilage; (2) the occurrence of certain typical secondary distortions and deformities of the skeleton; (3) the demonstration of inheritance in a large proportion of the cases. Hyperostoses above the affected epiphyses are the rule, but true exostoses are less frequent and of secondary importance. Photographs and skiagrams of a case are given.

T. R. WHIPHAM.

The metabolism in osteogenesis imperfecta, with special reference to calcium (*Amer. Journ. Dis. Child.*, 1914, VII, p. 436).—A. Bookman comes to the following conclusions: (1) In active cases the calcium retention is somewhat below or very decidedly below the normal. (2) It is probable that variations in the course of the disease cause changes in the calcium balance. (3) The deficient retention of calcium is apparently influenced favourably by cod-liver oil and phosphorus, and still more so by calcium lactate.

J. D. ROLLESTON.

A case of achondroplasia (*Brazil Medico*, 1914, XXVIII, p. 123).—Austregesilo and Esposel report a case of achondroplasia, which they say

is not rare in Brazil although not often reported. A photograph and skiagrams are included in the article, which gives complete measurements of the patient. There was nothing known in the general condition, physical or mental, of the patient. M. D. EDER.

Congenital deformity of both hands and both feet (*Arch. of Ped.*, 1915, xxxii, p. 274).—W. N. Bradley.—A male child, aged 5 months, showed the following deformities: In the right hand the fourth finger was completely missing. The fifth finger had a normal metacarpal, but only two phalanges, the third phalanx being rudimentary and flexed. In the left hand the second and fourth fingers were missing, and the little finger was similar to that on the right hand. In the right foot the great and second toes were webbed, and also the proximal and middle phalanges of the third and fourth toes. There was incomplete webbing of the proximal phalanges of the little toe and adjacent toe. In the left foot the great and second toes were webbed between the proximal phalanges. The third and fourth toes were missing. The fifth toe showed a normal metatarsal and two rudimentary phalanges. The toe was curved under the sole. The child was normal in every other respect, and there was no other abnormality in either branch of the family nor a history of maternal impressions.

J. D. ROLLESTON.

Polydactylism as a hereditary character (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1640).—J. W. Brandeis records instances of polydactylism in a brother and sister whose parents were first cousins, but presented no abnormality. He further dwells upon the hereditary nature of the trait and discusses the Mendelian principles as related to this condition.

T. R. WHIPHAM.

Acrocephalosyndactylism (*Amer. Journ. Dis. Child.*, 1915, ix, p. 446).—B. F. Davis records a case of this condition which presents the following characters: The skull is flattened posteriorly so that the external occipital protuberance is lacking; the squamous portion of the occipital bone is smooth and vertical; just above the lambdoid suture the skull bends forward and upward, reaching its maximum height at the bregma, where it meets at an acute angle the plane of the forehead. The frontonasal suture is widely open at birth, and remains so for the first three or four years of life, while the lambdoid suture is usually firmly closed. The transzygomatic and transtemporal diameters are usually increased. The bridge of the nose is usually depressed, and frequently there is exophthalmos. There is a horizontal shelf-like projection from the right and left alveolar ridges into the nose. The projections meet anteriorly. The teeth are rather irregularly implanted. The hands and feet present more or less complete syndactylism, which is always of the same type. In the hands the union is more intimate at the tips of the fingers than at the bases. Usually the nails of the three middle fingers are fused. The thumb and little finger may be free. The toes are grown together into a homogeneous mass whose anterior edge is bordered by the nails of the fused toes. Frequently the great toe may remain free. In some cases the number of fingers or toes is reduced to four, in others it may be increased to six or seven, even up to nine. The ætiology is unknown. There is no familial or hereditary character in connection with it. Lues and hydramnios during pregnancy may occur, but are not constant. The syndactylism may be due to amniotic adhesions, or there may be a trophic correlation between the faulty development of the base of the brain

and that of the extremities. The condition does not necessarily shorten life, and the intelligence may not be seriously impaired. The ages of the patients on record range from a few weeks to twenty-one years.

J. D. ROLLESTON.

Double club-foot in twins (*Med. Record*, 1915, LXXXVII, p. 1022).—**L. W. Ely.** The twins were both girls, aged 3 weeks, and supposed to have been seven months babies. They were the first children of the mother. There was no family history of deformity and no other deformities co-existed. The occurrence of double club-foot in twins is unique. Treatment consists in gradual reduction by plaster of Paris bandages.

J. D. ROLLESTON.

Talipes equinus (*Med. Press*, 1915, I, p. 496).—**Willmott Evans** maintains that it is seldom necessary to operate on very small babies for congenital equino-varus; it is nearly always sufficient to employ manipulation and the use of a splint, and by these means get the foot back into a right position; but where the child has reached the age of two years the most suitable time for manipulation treatment has gone by, and an operation is nearly always needed. In employing tenotomy the tenotome can be passed through the tendon from the skin towards the deeper parts or in the opposite direction. Neither method is essentially superior to the other, but it is important not to wound the skin, as subcutaneous tenotomy is less likely to lead to sepsis. Should a vessel be wounded when dividing the tendon, it is hardly ever necessary to do anything more than apply a pad to the part and bandage it on fairly firmly. In what position shall the foot be placed after the tenotomy? The older practice was to leave the foot in its original position, and to draw it into the normal position slowly by gentle traction day by day; by this method the bond of union between the two portions of the severed tendon becomes long and thin and of little functional value. Far better is the modern practice of placing the foot at once into the position which it is desirable that it should assume. When this is done exudation material fills up the space between the cut ends, and the firm mass of new tendon material is formed. In all tenotomy operations massage should begin early—say at the end of a week. Tenotomy is never advisable in paralytic deformities unless at the same time measures are taken to maintain the foot in the new position.

J. ALLAN.

Typhoid periostitis in a child (*Rev. med. y chir. pract.*, 1914, XXXVIII, p. 457).—**P. Olmedo.** A boy, aged 12 years, in convalescence from typhoid fever, developed a subperiosteal abscess on the inner surface of the tibia. A pure culture of typhoid bacilli was obtained from the pus. Rapid recovery followed operation.

J. D. ROLLESTON.

Surgical tuberculosis (*Journ. State Med.*, 1914, XXII, p. 714).—**H. J. Stiles** emphasises the fact that the greater part of the surgical tuberculosis met with in the children of this country is of bovine origin, and makes suggestions for the stamping out of bovine tuberculosis. Provision should be made for the systematic and uniform veterinary inspection, not merely of the byres in the city, but also of the cows on the small farms which supply milk to the labourers employed on the farms and to their country neighbours. The inspection should be carried out by whole-time veterinary surgeons. Power should be given to large municipalities to control the milk supply which is consigned to them from country districts. If legislation on

these lines, along with the provisions embodied in the Tuberculosis Order of the Board of Agriculture and Fisheries, be thoroughly and conscientiously taken advantage of by the local authorities throughout the country the amount of surgical tuberculosis met with in children ought to rapidly diminish. Until such legislation has been in force for some time it is the duty of the medical profession to insist on the boiling of all milk given to children.

J. ALLAN.

Tuberculous epiphysitis (*Med. Press,* 1915, I, p. 351).—**Willmot Evans** reports a case in a girl, aged 8 years. The recognition of the epiphyseal origin of the tuberculosis of a joint is greatly assisted by a skiagram; in fact, without the use of X rays it is rarely possible to recognise the condition sufficiently early to ensure a successful result. The author regarded it as extremely important that skiagrams should be taken in all cases of joint pain in children, even when the probability of its being due to tuberculosis was but small. The obvious treatment is to remove the original source of the disease, thus cutting off the supply of tuberculous bacilli and allowing the *vis medicatrix naturæ* of the synovial membrane to have its full action assisted by immobilisation of the joint. This method of treatment can succeed only when the tuberculous process in the joint has not gone too far.

J. ALLAN.

Acute influenzal thyroiditis and Pott's disease (*Arch. de Méd. des Enf.,* 1914, xvii, p. 434).—**Phélip and Trèves**. A girl, aged 13 years, with Pott's disease of the lower cervical vertebræ, developed the gastrointestinal form of influenza followed by acute thyroiditis. Violent dyspnoea ensued owing to compression of the trachea by the enlarged left lobe of the thyroid. Tracheotomy was performed, and the thyroiditis rapidly subsided without suppuration. There was no causal connection between Pott's disease and the thyroiditis, the co-existence of the two conditions being a mere coincidence. Thyroiditis in influenza has been noticed by previous writers, but it is very rare to find it accompanied by so much local and general disturbance.

J. D. ROLLESTON.

A case of lumbar spinal abscess communicating with the lung (*Med. Chron.,* 1915, lxi, p. 85).—**H. Platt**. A boy, aged 13 years, who had had spinal trouble since the age of two, and had had a lumbar spinal abscess for the last six years, had the sinus injected with Beck's bismuth paste for the purposes of outlining the track. Immediately after the injection the paste appeared in the mouth, the boy expectorating it without any sign of discomfort. X rays showed that the abscess cavity communicated with the lung.

J. D. ROLLESTON.

The treatment of cervical adenitis in children (*Boston Med. and Surg. Journ.,* 1914, clxx, p. 532).—**W. E. Ladd** considers that extirpation of all infected glands with the primary focus yields the highest percentage of cures. Operation should be performed before the glands have broken down. Hygiene has a very important place in the after-treatment.

F. R. B. ATKINSON.

A case of chondro-osteosarcoma: amputation at the hip (*Boston Med. and Surg. Journ.,* 1914, clxx, p. 511).—**R. W. Borell** narrates this case in a boy, aged 11½ years. A piece of the tumour removed revealed on microscopic examination the above condition. The removal of the hip was attended with complete success.

F. R. B. ATKINSON.

Congenital lymphangioma situated over the sternum (*'Lancet,'* 1915, I, p. 182).—**J. A. C. MacEwan** reports this case in a girl, aged 8 years. The growth was excised, and the pathological report, which is given in full, indicates the condition to be one of lymphangioma.

J. ALLAN.

Ovarian carcinoma in a child aged 11 years (*'Journ. Amer. Med. Assoc.,'* 1915, LXIV, p. 1577).—**V. B. Knott** reports the case of a healthy-looking girl, aged 11 years, who presented a large movable tumour in the middle line of the abdomen, with tenderness in the right iliac region. Until three days previously there had been no symptoms. The tumour and the appendix, which was acutely inflamed, were removed. The former was cystic and weighed 3 lb. 2 oz.; it was "a teratoma in a state of carcinomatous degeneration." Recurrence soon occurred, and the patient died in a little over seven weeks.

T. R. WHIPHAM.

Fibro-myxo-sarcoma of the mesentery in an infant (*'La Pediatria,'* 1915, XXIII, p. 184).—**L. Chiaravalloti** reports the case of a boy, aged 2 years, who had suffered for four months from constipation, severe abdominal colic, and marked abdominal enlargement. Examination showed the abdomen distended and tense, especially on the right side, with enlarged cutaneous veins. An enormous swelling occupied almost the entire right half from the liver to the iliac fossa, reaching posteriorly to the lumbar region. It was uniformly hard with smooth outline, with a longitudinal sulcus in the mammillary line, moved slightly with respiration, and was not tender. There was no fluid in the peritoneal cavity. The urine contained traces of albumin, glucose, bile pigments, and a good deal of acetone and indican. Wassermann and cuti-reactions negative both in patient and in parents. Operation discovered a perfectly circumscribed, capsulated tumour continuous with the healthy hepatic tissue. The capsule was firmly adherent by a pedicle to the great omentum. The consistence of the tumour was hard and elastic, its colour varying from reddish-grey to greyish-white. Considering its relations it must have had its origin in the omentum; histologically, it was partly myxosarcoma and partly fibromyxoma. The child only survived twenty-four hours. Owing to the large size to which they may attain, such tumours may lose their peritoneal character and render the diagnosis difficult, which can only be cleared up by laparotomy. Tumours of mixed embryonic type are not rare in children and generally originate from the parenchymatous tissues, especially the kidney, but may also arise from the connective tissue stroma of the ligamentous attachments.

VINCENT DICKINSON.

Reviews.

THE DISEASES OF CHILDREN: A WORK FOR THE PRACTISING PHYSICIAN.
 Edited by Dr. M. PFAUNDLER, Professor of Children's Diseases and Director of the Children's Clinic at the University of Munich, and Dr. A. SCHLOSSMANN, Professor of Children's Diseases and Director of the Children's Clinic at the Medical Academy in Dusseldorf. English Translation by HENRY L. K. SHAW, M.D., and LINNÆUS LA FETRA, M.D. Vol. VII. Philadelphia and London: J. B. Lippincott Company. Price 21s. net.

THIS handsome and imposing book is volume vii of what must be regarded as the most exhaustive treatise on diseases of children yet written, and the series may justly be claimed as a truly encyclopædic work in pædiatrics. The volume under review deals with the diseases of the eye in infancy and childhood and disorders of speech and phonation in childhood, Dr. Oskar Eversbusch, of Munich, being responsible for the former, while the latter is from the pen of Dr. Max Nadoleczny, of Munich. The English translation has been ably and carefully carried out by Drs. Shaw and La Fetra, two eminent American physicians well qualified to undertake the work.

The first part of the volume is devoted to diseases of the eye in infancy and childhood, and the collection and discussion of these diseases in such a way serve to emphasise their importance at this period of life. The opening chapter takes into consideration congenital anomalies and deformities of the eye, while chapter ii deals with the development of the infantile eye, in the course of which many important anatomical details are given. The examination of children with ocular affections next receives attention. Though the chapter is an excellent one, and though many useful practical points are given, we are of opinion that the author might with advantage have discussed this question more fully. He has erred by too great condensation, and he evidently presupposes a practical working knowledge of various methods on the part of the physician. Apart from these points the chapter is good, and that the author fully realises the folly of too strict local examinations in eye work is indicated by his opening sentence in this chapter: "The examination is not restricted to the eyes, competent treatment of the latter requiring a thorough examination of the entire constitution." Thereafter are discussed affections of the eyelids, lacrymal organs, conjunctiva, cornea, etc. There is a chapter on anomalies of refraction and accommodation, while a special chapter is devoted to disturbances of pupillary movements. The various diseases and affections are discussed chiefly from the clinical point of view, very little pathology having been included. Treatment is dealt with at length, being very carefully and clearly set forth.

Part ii of this volume, as already indicated, is devoted to the consideration of disorders of speech and phonation in childhood—a branch of pædiatric work which often receives less attention than it deserves. The first chapter is on the psychology and physiology of the development of speech, and here the author follows very closely the researches of Meumann and Stern. As he very aptly remarks, an exact knowledge of the development of speech in children is an indispensable foundation for understanding and correcting lingual disturbances. He next considers lingual arrests of development, which he divides into three subgroups. First, there are peripherally impressive arrests, such as total or partial deafness, etc.; secondly, there may be central arrest of lingual development, rarely referable to sensory causes, this group including word-deafness, word-dumbness, various forms of functional stammering, etc.; and thirdly, there may be peripheral expressive arrests of lingual development, such as lisping and snuffling. Chapter iii deals with disorders of speech occurring on or after the period of advanced development. These are partly genuine disturbances of speech and partly symptomatic manifestations occurring in functional and organic affections of the nervous system. One of the most important sections in this chapter is that on stuttering, which is very fully discussed, treatment especially being minutely described. In this group also there are disorders of speech met with at puberty, those associated with chorea, epilepsy, and

other nervous diseases, and those that are found in imbecility and in various organic diseases of the nervous system. An interesting chapter is that on disorders of the voice, while the importance and prophylaxis of disorders of speech and voice in school also receive consideration. In the concluding chapter so-called "congenital word-blindness" is discussed, and a bibliography (by no means complete) is appended in connection therewith. Part ii of this volume is well worth earnest study, and careful perusal should convince everyone not only that in this branch of medicine there is an ample field for painstaking and assiduous research, but also that much might be hoped for by the scientific treatment of these cases.

For the volume as a whole we cannot but express our high appreciation. There may be some points on which we do not see eye to eye with the authors, but that does not detract from the usefulness of the book. We think it would have enhanced the value of the book if references had been given when authors are mentioned. The volume is well illustrated, there being twenty-three full-page inserts in colour and black and nine coloured text illustrations, in addition to numerous figures in the text. The coloured plates have been exquisitely executed. The printing and binding are excellent, but the paper used seems unnecessarily heavy, rendering the handling of the volume rather arduous. The volume should appeal not only to the specialist, but also to the general practitioner for whom it was originally written. It is a standard work, and will, we think, remain so for many years to come. Medical men should feel much indebted to the gentlemen who have done the translation, and thus placed the work within the reach of a wider circle of readers. In conclusion, we have much confidence in bringing this excellent work of reference to the notice of all engaged in pædiatric work.

J. A.

THE MEDICAL ANNUAL SYNOPTICAL INDEX TO REMEDIES AND DISEASES.
Bristol: John Wright & Sons, Ltd. Price 8s. 6d. net.

FOR many years this JOURNAL has drawn attention to the value of the 'Medical Annual' to the profession as a whole, and to pædiatrists in particular, and we now accord a hearty welcome to the appearance of the present work, which forms an index to the volumes of the 'Medical Annual' from 1905 to 1914 inclusive. How well diseases of children are represented can be estimated by glancing at the references under the headings "children," "cholera infantum," "chorea," "infant feeding," "infectious diseases," "newborn (diseases of)," "milk," "rickets," and "syphilis (congenital)." Suggestions as to treatment are given in detail so as to obviate any necessity for further reference. An appendix contains an article on the metric method of prescribing, which is followed by a list of drugs giving the doses in imperial and metric measures in accordance with the British Pharmacopœia of 1914, and indicating the alterations which have been made.

A perusal of the work should convince the reader of the justice of the Editor's claim that it is practically an index to the medical literature of the last ten years.

The only criticism we have to offer is that which we have previously made in a review of the annual volume (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1914, xi, p. 333), namely, that an authors' index would considerably add to the usefulness of the work.

J. D. R.